DOCUMENT RESUME

ED 444 617 JC 000 556

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TITLE	Red Hot Tips: Improve Retention in Your Distance Education Courses.
PUB DATE	2000-10-00
NOTE	27p.; Paper presented at the League for Innovation International Conference (Chicago, IL, October 2000).
PUB TYPE	Reports - Descriptive (141) -- Speeches/Meeting Papers (150)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Community Colleges; *Distance Education; Educational Technology; *Faculty Development; *Instructional Effectiveness; Internet; Program Development; *Program Improvement; *School Holding Power; Two Year Colleges

ABSTRACT

The report describes both the problems faced and the strategies that have been implemented to resolve some of the problems in the Distance Learning Program at Tomball College in Texas. An examination of their Distance Education (DE) Program revealed multifaceted problems: instructor incompetence and curriculum inconsistency; student dissatisfaction with courses; and low retention level. It became evident that faculty may not have the technology application instruction, and design skills necessary to teach in a Distance Education (DE) environment. Some of the key points to resolving the problems in DE were to do the following: implement a training program for faculty and invest in it; know student characteristics such as factors of success and preference in DE modalities; and set instructor standards and track results. Training was moved to a formal setting by creating a Center for Distance Learning. The Distance Learning Center offers both a 40-hour DE program with a tuition of $1200 for non-faculty and a ten-week, online certification course with a $150 tuition. The results were positive. Retention rates improved dramatically. There was a 78.7 percent completion rate for the DE classes, and student complaints about DE course decreased by 78 percent. (JA)

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Red Hot Tips: Improve Retention in Your Distance Education Courses

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The League for Innovation International Conference
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October, 2000

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Introduction

Tomball College, a North Harris Montgomery County Community College District campus in the northwest part of the Houston-Harris County area, found us at a crossroads. We were faced with many of the same challenges any Community College that operates in the Distance Learning arena might face.

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In our case it was a critical set of challenges, because we literally couldn't afford to ignore them. The underlying driving force for that urgency was we didn't receive enough State support to allow our physical plant expansion program keep pace with our growing enrollment rates. We had more bodies wanting classes than we had classrooms and labs in which to put them. Distance learning wasn't just an emerging galaxy in the Internet universe, it was a *sin qua non* for our campuses continued success and growth.

Tomball College is one of four colleges in the North Harris Montgomery College District - a north Houston suburban community college district of 22,000 credit students. In the fall of 1998, 5.6% of NHMCCD's total credit enrollments were in distance education courses. Texans saw an 8.2% increase in distance education students over from the fall of 1996 – the fall of 1998. The business & PE division of Tomball College has had a 49% Increase over 97-98 alone. One of the reasons for this growth is that funding for community colleges in Texas is not increasing as quickly as the increase in total student enrollments in Texas community colleges. Although we can add more sections of courses to our schedules we have no classrooms or labs to put the extra students. Courses offered via distance allow us to increase our course offerings without being constrained by building space facilities budgets. The primary reason for this growth is that community college students have busy complicated lives that do not always lend themselves to allow for scheduled on-campus classes offered at the same place and same time each week. Many students need the schedule flexibility that distance education offers. They have full-time jobs that require overtime, are trying to juggle spending family time in the evening while continuing their education, and there are single parents without evening or Saturday care for their children.

Description of Problems in DL Program

Distance Learning has been defined as occurring when "the instructor delivers the course in some place and at some time while the student is learning the course outcomes at a another place and time." When we discuss distance education in our presentation we are looking at Internet, independent study (paper-based), and video delivery methods.

We like to call it Distance Education instead of Distance Learning. But, whatever you call it, an examination of the status of our DE Program revealed multi-faceted problems. Instructor competence and curriculum consistency was all over the map, student dissatisfaction with those courses was too high, and DE students consistently were complaining to the administration about the quality of the

classes. Worst of all, the retention level in them was abysmal – especially as it affected the "first day of record." And that was the point in time upon which the State based our per-student funding supplement.

We knew things had to be fixed, and they had to be fixed quickly.

Details of Problem Resolution

Two problems became evident to us from the beginning of our effort.

- First, faculty may not have the skills to teach in a Distance Education environment – especially technology application skills, and instruction and design skills.
- Second, too many Community colleges (including ours) were doing little to train their faculty in Distance Education methodologies.

Therefore, we implemented strategies that ensure student success and have gained a positive reputation for our distance education program and for student retention in our distance education courses. The key points to resolving our problems in DE were to do the following:

Know Your Students – do they have typical characteristics, what factors make a "successful" student, what courses do the students want, what DE modalities do they prefer and what do they think of your current DE class offerings? This was a critical point because over 16% of the division's 6,800 enrollments are in some from of DE course. We *had to have insight* about this group of students if we were going to be successful in our DE effort.

Implement a Training Program and Invest in it – Place your emphasis on *teaching in the modality*, not necessarily how to use it. Train both your adjunct and your full-time faculty. The division incurs the training costs for both adjunct and full-time instructors and subs will be paid if necessary.

Some of the topics covered in the general training are:

- Module 1 - Introduction to Distance Education
- Module 2 - Copyright in an Electronic Environment
- Module 3 - Instructional Systems Design
- Module 4 - Graphic Design & Electronic Presentation 101
- Module 5 – PowerPoint
- Module 6 - Interactive Teaching Strategies
- Module 7 - Web Page Design

- Module 8 - Presentations
- Module 9 - Evaluation
- Module 10 - DL Resources

We took a risk by requiring some of these items of our faculty, but they are happy to go along and view teaching these courses as a perk – offered only to the "best" instructors. Half of our adjunct in Computer Information Systems are trained and a100% of the full-time faculty. **And due to the strategies employed we are thrilled to see student complaints drop 78% over the period of fall 1996-spring 1999. And our trained adjuncts are better in the traditional on campus classes than those not trained.** Due to the nature of typical technical adjunct faculty they had never had curriculum design and theories of adult learning until they took our training.

Set Instructor Standards and Track Results – by the time you get student feedback without actively soliciting it, it usually is in the form of a drop out or a complaint that can damage that student's whole opinion of and participation in your DE program. The Business & Physical Education division now requires new faculty hires to get DE training and certification within their first 12 months.

Other lessons we learned are that we needed to:

Utilize "off-the-shelf" Solutions – They are a quicker, more cost-efficient way to expand your Distance Education course offerings. They also mean less work for your faculty.

Invest Time and Money in Standardizing Course Formats – This results in higher student satisfaction with their courses and it increases the confidence level of faculty members new to the DE experience.

Spend Time and Money in Developing Communication and Advertisement Strategies – We included: e-mail for the students, briefings for the advisors, student self-assessments, publicizing contact information and getting a course instructors commitment to engage in and continue timely communication with their students. That meant having faculty available by e-mail as well as by phone.

To meet our identified needs and to reach the agreed-upon goals we felt were necessary to energize our DE effort, we placed our training in a formal setting by creating a Center for Distance Learning at NHMCCD's University Center campus

in The Woodlands. The University Center has strategic partnerships with several major universities – including Texas A&M and the University of Houston.

We also decided the same DE training should be offered to members of the public as well as to our faculty. We believe that provides for additional cross-pollination of the academic experience with the "real world" of business, industry and technology. It also helped that the DL Center location was only a few minutes away from the burgeoning Science and Technology corridor unfolding along Research Forest Drive in the Woodlands.

That same corridor is home to the Houston Advanced Research Center (HARC) – an entity that bills itself as a "Center for the Performing Sciences" and engages in significant outreach in the form of programs and mentoring of selected students from the Conroe ISD Academy of Sciences program. That effectively places our University Center and our Distance Learning Center almost in the middle of a perfect educational ecosystem – one that provides for synergistic possibilities limited only by our own imaginations and our desire for mutual cooperation and collaboration.

The Distance Learning Center offers both a 40-hour DE program with a $1200 tuition for non-faculty and a ten-week, online certification course with a $150 tuition.

It was obvious to us from the beginning that Distance Education was going to grow like the Internet itself. The figures were there for us in Texas. Our state had the second highest population (33% of our 4.6 million residents) using the Internet, and 59 percent of those users were less than 29 years old. The greater Houston Area ranked second in sheer numbers and third in percentage-of-population among Texas metropolitan areas, with an estimated 1,144,000 users according to 1999 statistics from the State Comptroller's office.

We all know that Community Colleges are in the middle of the same attempt taking place at the highest academic levels, like HARC, Silicon Valley in California, the Research Triangle in North Carolina and in Austin, Texas's Hill County High Tech Industry. In a different way, it is the same thing NASA is trying to do and succeeding at – taking the academic and the abstract concept and applying it to "real world" applications and products. The process itself in such an effort becomes one of its own best products. The same promise exists for Distance Education/Distance Learning as a 21st Century Cyber tool that will occupy an

important place in our educational arsenal. That is one of our long-term goals at Tomball College.

Benefits to the College and to the Students

The results were positive and continue to be so from the time we implemented these practices. They continue to be refined and expanded.

As far as the "numbers game," retention rates improved dramatically. We saw a 78.7 percent completion rate for the DE classes, and student complaints about our DE course offerings went down by 78 percent. Course dropout rates also diminished dramatically – from 141 in 1998-99 to 44 in 1999-2000.

We also found that DE trained faculty could handle larger classes, their students had overall higher grades, their classes received an average of seven percent higher student evaluations and they had fewer dropouts. Gone were the days of a class completion rate in the low 40 percentile.

Another positive thing happened for us. The faculty teaching our DE courses began to view themselves as being among our "best," and they now view being given such an assignment as a "perk."

Benefits

For more information and to see the specific details of our research, please view our PowerPoint presentation included with this document. If you have questions, feel free to contact either Jim Simpson or Linda Head at the email addresses listed on the 1st page.

Good luck for a successful DL program!!!

Red Hot Tips: Improve Retention in Your Distance Education Courses

Presented by:

Mr. Jim Simpson & Ms. Linda Head

Tomball College
North Harris Montgomery Community College District
Tomball, Texas

Tomball College

- **Located in Tomball, Texas**
- **Northern Suburb of Houston**
- **Part of The North Harris Montgomery County Community College District**
  - Four College System
  - District Serves 23,000+ Credit Students
  - Fall 99, 6.7% of NHMCCD's total credit enrollments were in distance learning courses

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Business & Physical Education Division

- **Disciplines Served:**

  Accounting, Business, Computer Science, Engineering Technology, Economics, Graphics, Legal Assisting, Management, Marketing, Office Administration, & Physical Education

- **Serve over 6,500+ enrollments per year.**
  - 16+% Increase in enrollments in 98-99
  - Accounts for approximately 36+% of Tomball College's Distance Education Enrollments

Overview of Distance Education

DE Growth Projected

Source: 10-4-99 Business Week

- **710,000 students took online courses in 1998.**
- **2.23 million students are projected to take online courses in 2003.**
  - 214% increase over 5 years vs 3.4% increase in higher education.
  - Represents 15% of all higher education students.

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Internet Users in USA

Source: 9-99 Tx. Comptroller of Public Accounts--Fiscal Notes

State	Adult Users	% of Population
California	8.3 million	36%
Texas	**4.6 million**	**33%**
New York	3.6 million	27%
Pennsylvania	2.4 million	27%
Illinois	2.2 million	26%
Virginia	2.0 million	40%
New Jersey	1.9 million	32%
Massachusetts	1.8 million	39%
Michigan	1.8 million	26%
Maryland	1.8 million	45%

Internet Users in Texas

Source: 9-99 Tx. Comptroller of Public Accounts--Fiscal Notes

- **4.6 million adult internet users in Texas.**
  2nd highest total in the United States
- **50% of all Texas internet users are under 29 years old.**
  Nationally 45% of all internet users are under 29 years old.

Texas Cities With The Most Users

Source: 9-99 Tx. Comptroller of Public Accounts--Fiscal Notes

Rank	City	Users	Population	Under 29
1	Austin	443,000	59%	53%
8	Dallas	1,671,000	44%	54%
24	**Houston**	**1,144,000**	**35%**	**58%**
44	San Antonio	265,000	25%	55%

Notes:

- 56% of all Texas users are located in Austin, Dallas, Houston, & San Antonio
- 64% of all Texas users under 29 are located in Austin, Dallas, Houston & San Antonio

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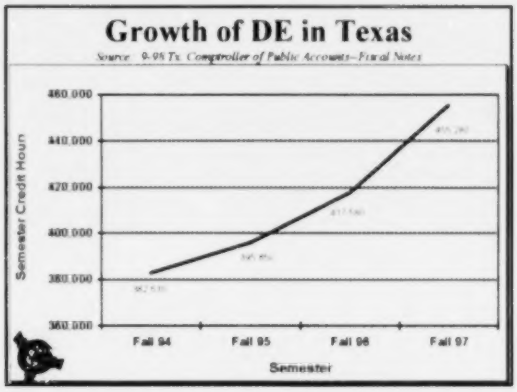

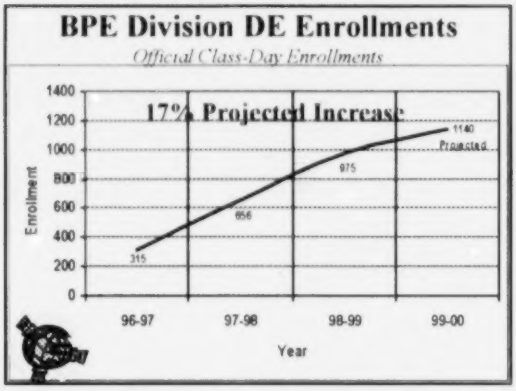

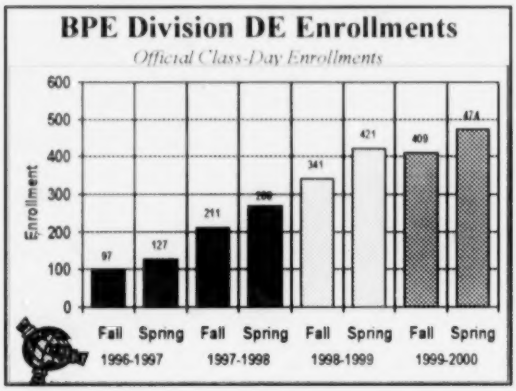

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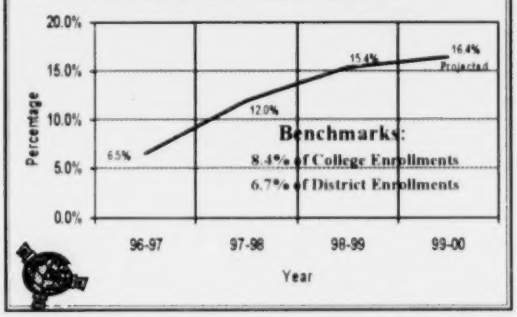
Per Cent of Total Division Enrollments in DE Classes



We had lots of students, but.....

- Over 30% of the students enrolled in BPE Division distance education courses complained to an administrator about the experience.
- There was inconsistency in the quality of instruction.
- Completion rates were in the low 40% range.

Two Common Problems

- Faculty may not have the skills to teach in a distance education environment.
  - Technology Skills
  - Course Design Skills
- Colleges are doing little to train their faculty.
  - Only 29% require training
  - Total training practice averages just 11 hours

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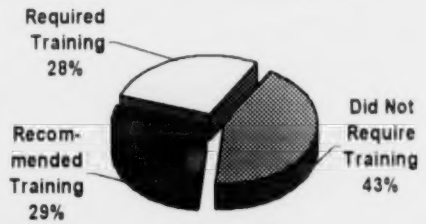
NHMCCD Distance Education Training Program

Faculty Training in the U.S

Colleges Requiring Training



Source: The Instructional Telecommunications Council

So we trained our faculty ...and made it mandatory

- Formal Certified Distance Education training
- Less formal Web CT & Web design training
- Use of CTI's CyberClass
- Common course curriculum

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NHMCCD's Center for Technology & Distance Learning

- CTDL was formed in 1997 and is located at the University Center in The Woodlands, Texas.
- Purpose is to provide professional development opportunities and distance education support to NHMCCD employees and the public.
- CTDL specializes in training for distance education.

CTDL Professional Development Programs

- **Certification Programs**
  - Distance Learning Certification
    - 40 hours, $1,200 tuition
  - On-Line Development Certification
    - 10 week on-line course, $150 tuition
- **Workshops**
  - Power Point, Web Design, & WebCT
    - 3 to 6 hours, $100 tuition

Distance Education Certification

Certification Goals

- Network with other DL faculty.
- Gain an understanding of the planning and organizational requirements.
- Learn how to integrate interactive teaching strategies with mediated instruction.
- Learn how to build support systems to help students.
- Build technical skills though hands-on activities.

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DE Certification Program

Course Outline

- Module 1 - Introduction to Distance Learning *
- Module 2 - Copyright in an Electronic Environment
- Module 3 - Instructional Systems Design *
- Module 4 - Graphic Design & Electronic Presentation 101
- Module 5 - PowerPoint

* Will discuss in detail those modules faculty commented on the most in after-training survey

DE Certification Program

Course Outline

- Module 6 - Interactive Teaching Strategies *
- Module 7 - Web Page Design
  (Separate course available for Web CT design)
- Module 8 - Presentations *
- Module 9 - Evaluation
- Module 10 - DL Resources

* Will discuss in detail those modules faculty commented on the most in after-training survey

Other Training Offered By CTDL

Web CT

Web Design

PowerPoint

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Results of Distance Education Training

Division Faculty Who Are Certified

- **21 faculty certified as of 01/01/00**
  - 20 certified by NHMCCD
  - 1 certified by Texas A&M University
- **Disciplines of faculty certified.**
  - 1 in Office Administration
  - 1 in Management Marketing
  - 19 in Computer Science.

Division Faculty Who Are Certified

- **Employment status of faculty certified.**
  - 4 permanent full-time faculty (31% of all F-T within the division during Fall 99).
  - 17 adjunct faculty (23% of all adjunct within the division during Fall 99).

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How Faculty Ranked The Learning Modules

(All NHMCCD Faculty Who Completed Training in Fall 1999)

#1 Interactive Strategies

#2 Instructional Design

#3 Planning/Organization

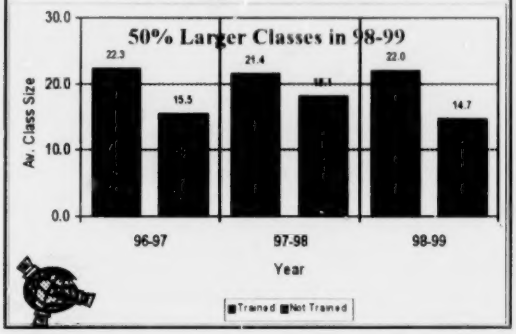
#4 Presentation Concepts

Average Class Size

Fall 96 to Spring 99

- **21.89 average per section enrollment in classes taught by trained faculty.**
  44 total sections.
- **16.84 average per section enrollment in classes taught by faculty who have not received training.**
  70 total sections.
- **Trained faculty class size is 30% larger than untrained faculty.**

Average Class Size



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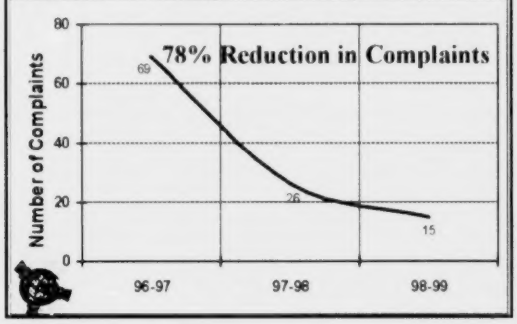
Number of Complaints

- **214 total complaints received from Fall 96 through Summer 99.**
  - 110 complaints were regarding distance education courses (51.4%)
- **Of the 110 complaints regarding distance education.**
  - 13 complaints (12%) were about trained instructors.

Number of Complaints



Fall 98 Student Evaluations

- **Trained Faculty**
  - Average score of 6.33 on a 7 point scale.
  - Range of scores were from 5.40 to 6.87 on the overall effectiveness of the instructor.
- **Untrained Faculty**
  - Average Score of 5.93 on a 7 point scale.
  - Range of scores were from 4.95 to 6.90 on the overall effectiveness of the instructor.

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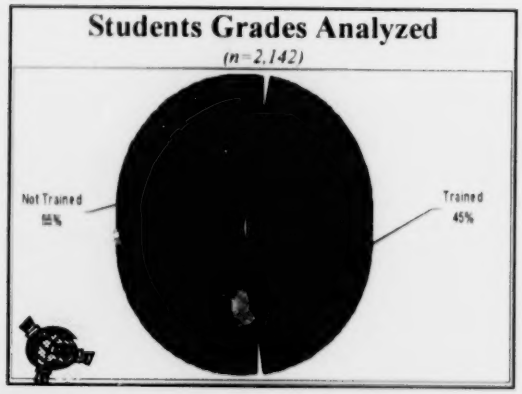

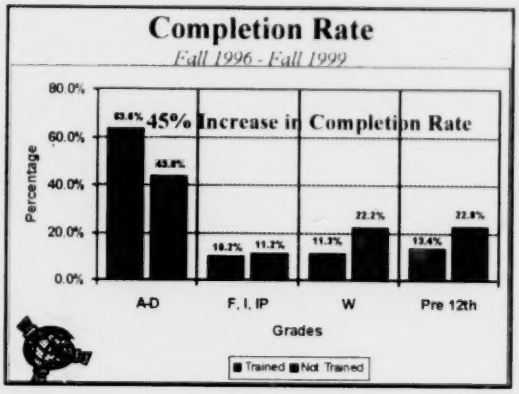

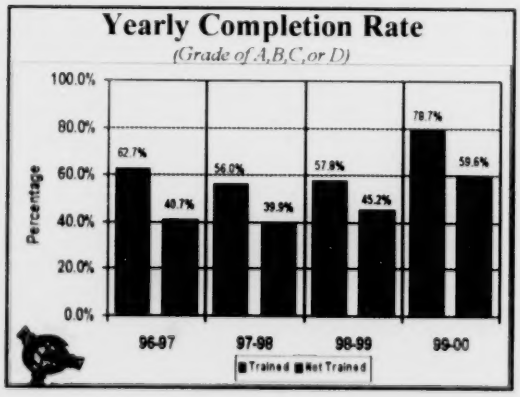

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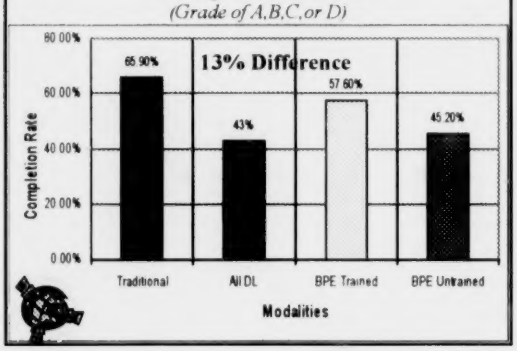
Completion Rate

(Grade of A,B,C,or D)



Tomball College's Drop-Out Strategy

CTI CyberClass

CyberClass includes:

- Textbook content
- Flashcards to practice vocabulary
- Jeopardy game to practice concepts
- Instructor's syllabus & other materials
- On-line chat (use to present group project)
- Practice exams

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Common Curriculum Package

Syllabus with common elements
Time table
Assignment sheet
Grade sheet
Electronic testing
Test reviews
Group projects

Additional Strategies

- Increased Communication Activities
  - Faculty phone number is listed in the semester schedule for the distance education class they are teaching.
    - All faculty teaching distance education courses provide students with their e-mail address
    - Communication standards established for faculty teaching distance education courses
  - Require students to have access to e-mail in all distance education modalities.
  - Increased emphasis on a student orientation for their class.

Additional Strategies

- Increased Emphasis on Advisement
  - On-line self assessment for students.
  - More information provided to advisors about course requirements.
  - Less schedule "dumping" in distance education courses.
- Surveying Students
  - What's working and what's not.

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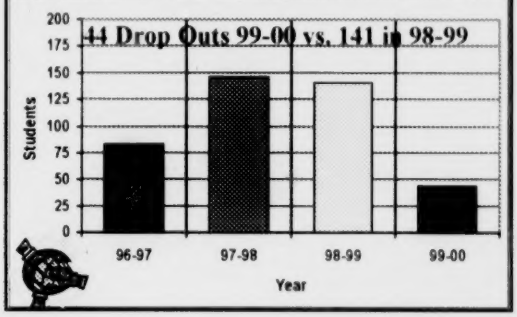
Drop Outs Before Official Day

Fall 1996 - Spring 2000



Economic Benefits of Reducing Your Drop-Out Rate

- **$243 average state source revenue per enrollment on official day of record.**
  - 97 fewer drop-outs before the official day of record during Fall 1999 and Spring 2000.

$23,571 Additional State Revenue in 99-90

Observations

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Observations

- **Little to No Impact on F's, I's, & IP's.**
  - Faculty training appears to have little impact on the number of F's, I's, and IP's earned in a distance education class.
- **Students are Less Likely to Withdraw Before the Official Day of Record.**
  - Faculty training appears to have an impact on the number of students who withdraw from a distance education class before the official day of record.

Observations

- **Class Sizes are 1.3 x's Larger.**
  - A trained faculty member can handle larger distance education class sizes.
- **8.5 x"s fewer Student Complaints.**
  - Students have fewer complaints of all types about distance education courses taught by a trained faculty member.

Observations

- **Student Evaluations are 7% Higher.**
  - Students are likely to be more satisfied with the instruction of a trained distance education instructor.
  - There appears to be a more consistency among trained DE instructors vs. untrained instructors.

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Observations

- **49% Fewer Drops.**
  - Students are less likely to drop a distance education class after the official day of record if the class is taught by a trained faculty member.
- **1.5 x's More Likely to Receive a Grade of A,B,C, or D.**
  - Students are more likely to be successful in a distance education class taught by a trained faculty member.

Observations

- **Students who attend orientation have a higher success rates than those students who do not attend orientation for distance education courses.**
  - The success rate 26.3% higher--but not as high as we expected (n=311).
- **Students who score 19 or higher on a DE self-assessment have higher success rates.**
  - The success rate is 65.6% higher (n=170).

Observations

- Improvement in our completion rates may due to the large number of adjunct faculty the division uses to teach distance education courses.

"I would have loved to have had even a miniscule amount of training such as this before I started teaching as an adjunct. I am really looking forward to putting the training to use." --Tammey Dunn

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Lessons Learned

Been There, Done That, Got The T-Shirt

Lessons Learned

- Implement a Training Program & Invest in Instructor Training.
  - Emphasis on teaching in the modality not necessarily how to use the modality.
  - Train both full-time and adjunct instructors
- Set Instructor Standards and Track Results.
  - BPE Division now requires that new faculty hired obtain DE Certification within 12 months.

Lessons Learned

- Utilize "Off The Shelf" Solutions to Expand Your Distance Education Course Offerings.
  - Its quicker, more cost efficient, and results in less work for your faculty.
- Invest Time/Money In Standardizing Course Formats.
  - Results in higher student satisfaction with your courses.
  - Increases confidence of faculty new to distance education.

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Lessons Learned

- Invest Time, Energy, Effort and Money Into Communication & Advisement Strategies.
  - E-mail for students
  - Briefings for advisors
  - Student self-assessments
  - Publicize contact information.
  - Instructor commitment to maintaining timely communication with the student.

Lessons Learned

- Know Your Students
  - What are the characteristics of your DE students?
  - What does a successful student look like?
  - What courses do they want?
  - What DE modalities do they prefer?
  - What do they think of the DE class they are taking?

Questions?

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For More Information

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